

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 (Previously presented) A gene targeting vector for introducing an exogenous gene into the ZO-1 gene region in a non-human mammal without affecting cellular function, wherein the vector comprises the exogenous gene inserted between a first and a second ZO-1 gene fragment, wherein the first and second ZO-1 gene fragments are arranged in the same order as that of the native ZO-1 gene.

2 (Canceled).

3 (Previously presented) The vector of claim 1, wherein one of said first and second ZO-1 gene fragments comprises exon II or a portion thereof.

4 (Previously presented) The vector of claim 3 wherein:

- (a) said first ZO-1 gene fragment comprises a 1.5 kb Bsp1286I-Bsp1286I fragment comprising a partial exon II of the ZO-1 gene and its upstream, and said second ZO-1 gene fragment comprises an 8.5 kb PstI-BamHI fragment located downstream of exon II; or
- (b) said first ZO-1 gene fragment comprises a 5.1 kb PstI-BsrDI fragment comprising a partial exon II of the ZO-1 gene and its upstream, and said second ZO-1 gene fragment comprises a 3.9 kb PstI-SphI fragment located downstream of exon II.

5-6 (Canceled).

7 (Previously presented) The vector of claim 1, wherein the vector is used for generating a non-human mammal expressing an exogenous gene or a non-human mammalian cell expressing an exogenous gene.

8 (Previously presented) The vector of claim 1, wherein the vector comprises in the upstream of an exogenous gene a promoter capable of transcribing the exogenous gene.

9 (Previously presented) The vector of claim 1, wherein the vector further comprises a marker gene expression cassette.

10 (Previously presented) The vector of claim 9, wherein the exogenous gene is placed adjacent to or downstream of a marker gene expression cassette.

11 (Previously presented) The vector of claim 1, wherein the exogenous gene is a marker gene expression cassette.

12 (Previously presented) The vector of claim 9, wherein the marker gene expression cassette is a drug resistance gene expression cassette.

13 (Original) The vector of claim 12, wherein the drug resistance gene expression cassette is a DNA fragment comprising β -geo.

14 (Previously presented) The vector of claim 1, wherein the non-human mammal is a mouse.

15-22 (Canceled).

23 (Previously presented) The vector of claim 11, wherein the marker gene expression cassette is a drug resistance gene expression cassette.

24 (Previously presented) The vector of claim 23, wherein the drug resistance gene expression cassette is a DNA fragment comprising β -geo.

25 (Previously presented) A linear targeting vector for introducing an exogenous gene into the ZO-1 gene region in a non-human mammal without affecting cellular function, wherein the vector comprises in the 5' to 3' direction a first ZO-1 gene fragment, an exogenous gene, and a second ZO-1 gene fragment.